



## Executive Summary

# Regional Transportation Plan for Northern New Jersey

# ACCESS & MOBILITY 2025

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NORTH JERSEY  
TRANSPORTATION  
PLANNING  
AUTHORITY, INC.



# THE NJTPA

To insure that our transportation taxes are spent cost-effectively to improve mobility, support economic progress and safeguard the environment, the federal government has established locally-controlled planning agencies, called Metropolitan Planning Organizations (MPOs) in each urbanized region of the country.

The North Jersey Transportation Planning Authority, Inc. (NJTPA) is the MPO for northern New Jersey. As required under the federal Transportation Equity Act for the 21st Century (TEA-21), the NJTPA evaluates, prioritizes and approves proposed transportation projects for its region amounting to over \$1 billion each year. In doing so, it serves as a forum for interagency cooperation and public participation in transportation funding decisions. It also sponsors and conducts studies, assists member planning agencies and monitors compliance with national air quality goals.

The NJTPA region encompasses over 6 million people in 13 counties: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren. The region is home to 74 percent of the state's population and is the fourth largest MPO region in the nation.

The NJTPA Board of Trustees consists of one elected official from each of the 15 "subregions"—the 13 counties and two major cities, Newark and Jersey City. The Board also includes a Governor's Representative, the Commissioner of the New Jersey Department of Transportation (NJDOT), the Executive Directors of NJ Transit and the Port Authority of New York and New Jersey and a Citizens' Representative appointed by the Governor.

NJTPA Board meetings are held monthly and are open to the public. Issues are brought before the Board by three standing committees: Planning and Economic Development, Project Prioritization and Operations and Oversight. In addition, a Regional Transportation Advisory Committee (R-TAC) composed of planners and engineers from member agencies meets monthly to discuss and coordinate planning activities under way in the region. The NJTPA is affiliated with the New Jersey Institute of Technology, which serves as its host agency.



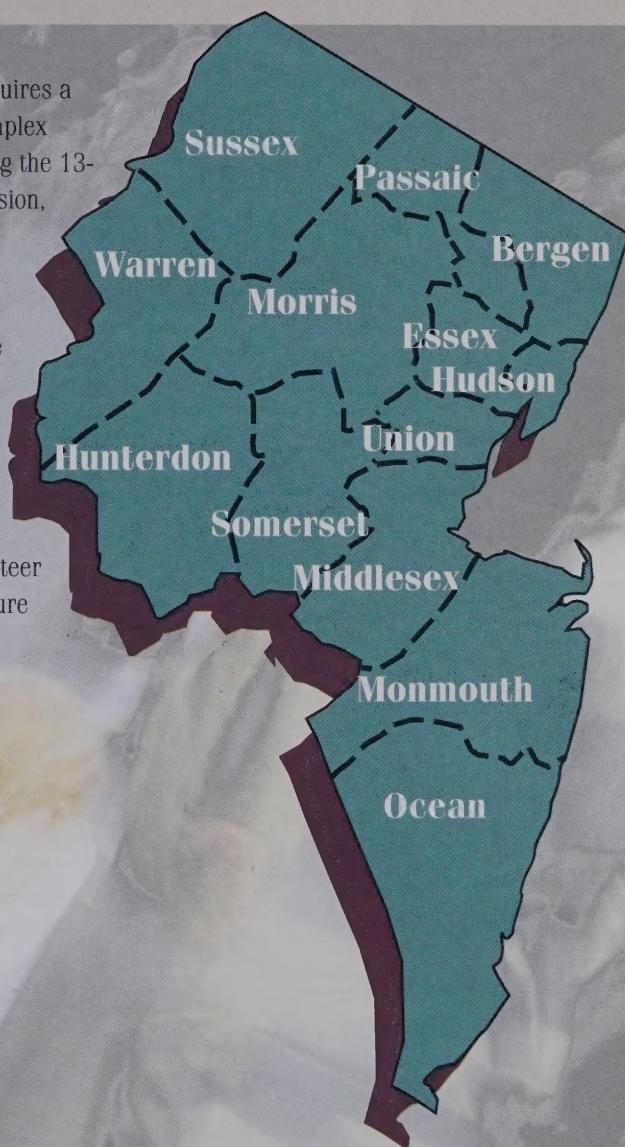
# INTRODUCTION

**E**very day millions of people in northern New Jersey share a common, often urgent mission. They need to get somewhere — to offices, schools, malls, parks, hospitals, homes of friends and relatives or any number of other places. To do that, they must use the region's transportation system. Some will drive cars; others will ride buses, commuter trains or light rail cars. Some will walk or pedal bicycles. Businesses also depend on the transportation system to move goods and provide services.

Residents and business operators alike require a transportation system that provides them with access to a variety of opportunities and good mobility to get there in a reasonably timely manner. In recognition of these critical needs, the North Jersey Transportation Planning Authority, Inc. (NJTPA) has named its long-range transportation plan *Access & Mobility*.

The NJTPA created the plan in response to mandates in the federal Transportation Equity Act for the 21st

Century (TEA-21), which requires a long-range vision for the complex transportation system serving the 13-county NJTPA region. This vision, called the Regional Transportation Plan (RTP), must be updated every three years. *Access & Mobility*, the 2001 update of that plan, creates a framework for identifying and evaluating potential projects in key regional transportation corridors. This framework will steer federal and state infrastructure investment through 2025.



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*Access & Mobility* will help the region address numerous transportation challenges. A few examples include:

- widespread traffic congestion that may worsen as population and jobs increase;
- aging roads, bridges and rail lines in need of repair and maintenance;
- demand for expanded mass transit services;
- suburban land use patterns that promote driving and overwhelm local roads with heavy traffic; and
- threats to the region's air quality and natural resources.



The result is a plan that will steer more than \$40 billion in transportation investments over the next 25 years to provide better access and enhanced mobility in northern New Jersey. This Executive Summary highlights some of the key elements of the plan.



In creating this plan, the NJTPA gathered information and input from many sources, ranging from sophisticated data-intensive computer models to meetings of concerned citizens.





# PLANNING GOALS

**U**nder TEA-21, the NJTPA and other Metropolitan Planning Organizations (MPOs) have a broader, stronger mandate to conduct regional transportation planning. Regulations stemming from TEA-21 call on MPOs to directly consider seven factors in the planning process:

- 1.** Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- 2.** Increase the safety and security of the transportation system for motorized and non-motorized users.
- 3.** Increase the accessibility and mobility options available to people and freight.
- 4.** Protect and enhance the environment, promote energy conservation, and improve quality of life.
- 5.** Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- 6.** Promote efficient system management and operation.
- 7.** Emphasize the preservation of the existing transportation system.

The NJTPA has used these planning factors to guide the development of *Access & Mobility*. It also adopted the following six goals (which mirror TEA-21's seven planning factors) as priorities for the region:

- Protect and improve the quality of natural ecosystems and the human environment.
- Provide affordable, accessible and dynamic transportation systems responsive to current and future customers.
- Retain and increase economic activity and competitiveness.
- Enhance system coordination, efficiency, and intermodal connectivity.
- Maintain a safe and reliable transportation system in a state of good repair.
- Support the coordination of land use with transportation systems.

These goals serve as common "points of departure" for all planning decisions. In particular, they provide the basis for scoring systems used to prioritize proposed projects for entry into various stages of the project development "pipelines." The NJTPA has identified performance measures for each goal — such as Vehicle Miles Traveled per capita, transit ridership levels and days per year with poor air quality — that will be used to assess progress in fulfilling the goals.

## PUBLIC INVOLVEMENT

**T**he NJTPA carried out an extensive public outreach effort in preparing *Access & Mobility*. These efforts were intended to:

- provide opportunities for all stakeholders – including residents, businesses, academia and interest groups – to participate in the development of *Access & Mobility*;
- engage non-traditional stakeholders, such as minorities and low-income individuals;
- provide general information about the NJTPA as well as more specific information about *Access & Mobility* itself; and
- gather public input concerning transportation needs and opportunities.

The public involvement effort included:

- Distribution of brochures, flyers and other information in English and Spanish;
- More than 25 public meetings held to share information and gather input;
- Interviews with key stakeholders and interest groups; and
- Widespread distribution of the draft plan through mailings, New Jersey Network libraries and the NJTPA website.





# THE TRANSPORTATION SYSTEM

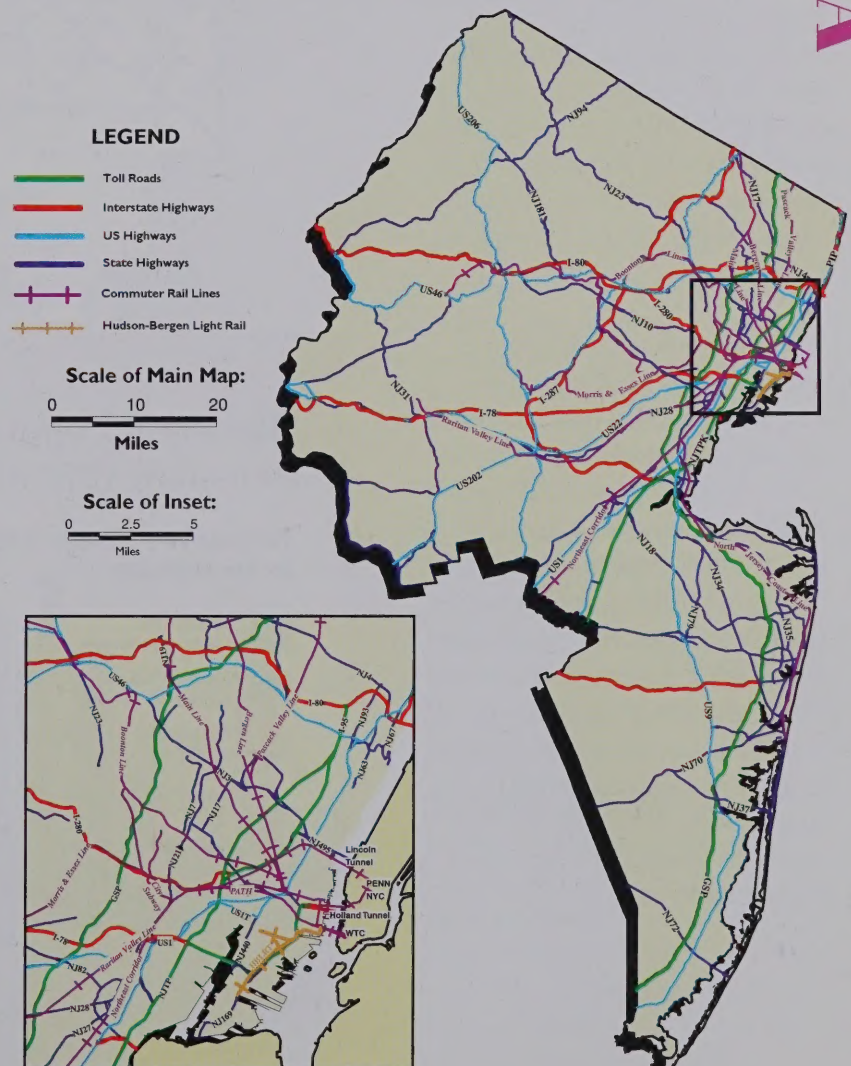
**N**orthern New Jersey is endowed with a far-reaching and diverse transportation network. Elements include:

- 2,000 miles of freeways/expressways, 6,000 miles of arterial highways and 15,000 miles of local roadways serving auto, truck and bus traffic.
- An extensive mass transit network — including a 10-line, 150-station, 390-mile regional rail system and 250 bus routes — with the third highest ridership in the nation, exceeded only by New York City and Chicago.
- Intermediate services that include paratransit (or "demand responsive") services, carpooling ("ridesharing") and park and ride facilities.
- Facilities for walking and biking that play a very important part in local travel.
- An extensive freight rail network operated by Norfolk-Southern, CSX and several short-line railroads.
- Major marine port facilities including Port Newark/Elizabeth, one of the largest containerized cargo facilities in the United States.

■ 13 ferry routes from New Jersey to Manhattan serving approximately 24,000 riders each day.

■ Newark International Airport, which handles 27 million travelers and 1.1 million tons of air cargo annually.

## Regional Transportation Network





# POPULATION

**D**emographics play a critical role in defining transportation in the region. Northern New Jersey, the more populous part of the most densely populated state, is far from uniform. Its environments range from sparsely populated rural areas to mature urban centers, with every type of suburban setting in between.

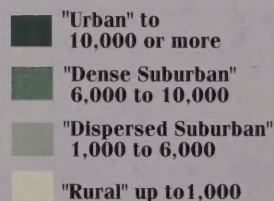
The northeastern counties, including Hudson, Bergen, Essex, and Union counties, are the most densely populated. Yet for the most part, the region's population is quite dispersed. In fact, just a fifth of residents live in municipalities considered "urban," with a majority living in suburban or exurban areas.

The varying population densities around the region help determine what modes of travel residents can use (see Mode Shares chart).

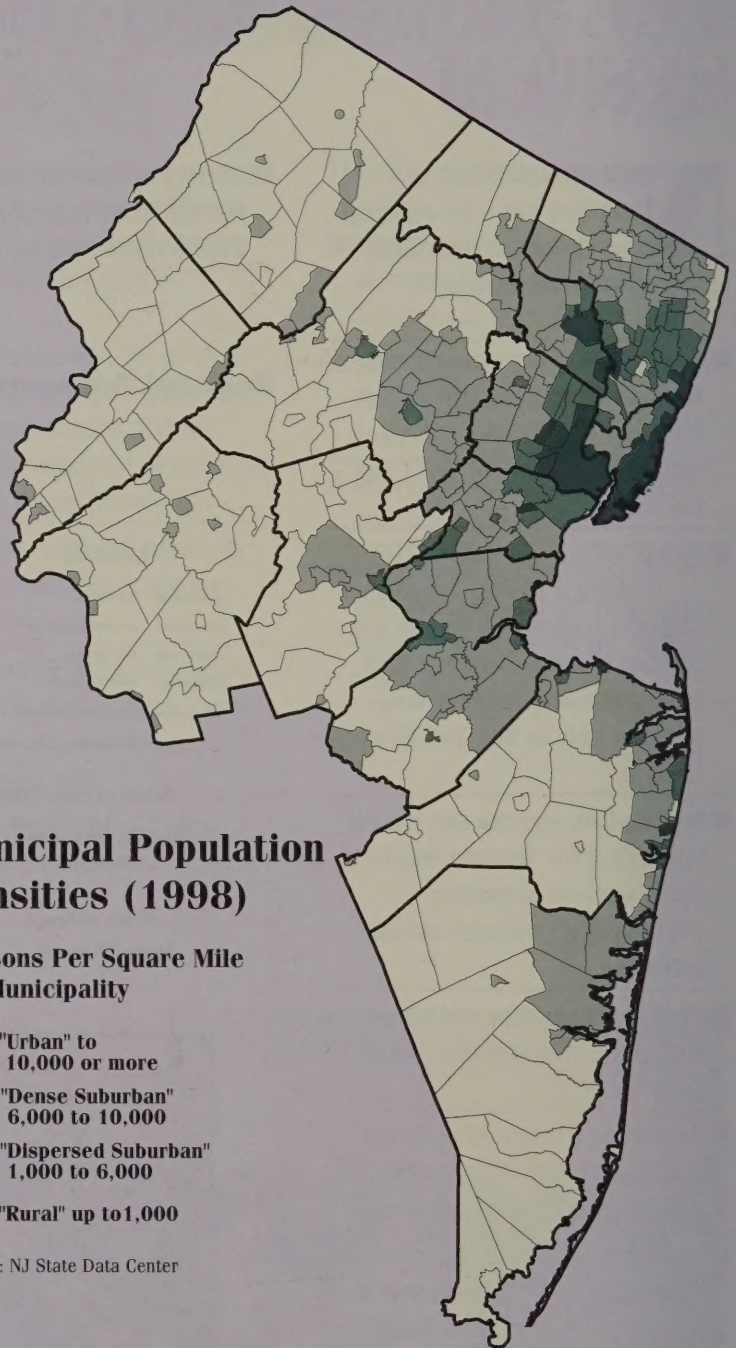
By 2025, the region's population is expected to increase from 6 million to over 7 million. NJTPA projections (see chart) show continued robust population growth in Hunterdon, Middlesex, Monmouth, Morris, and Somerset counties, along with modest changes in the more mature metropolitan core counties in the north and east. This population growth will create more travel demand.

## Municipal Population Densities (1998)

Persons Per Square Mile  
By Municipality

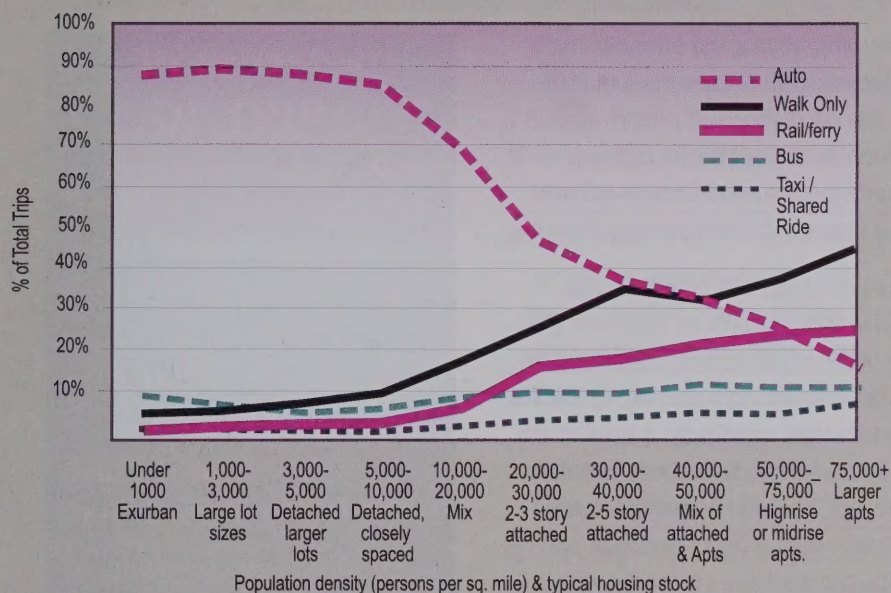


Source: NJ State Data Center





## Mode Shares and Density



Other demographic trends also will affect transportation, including:

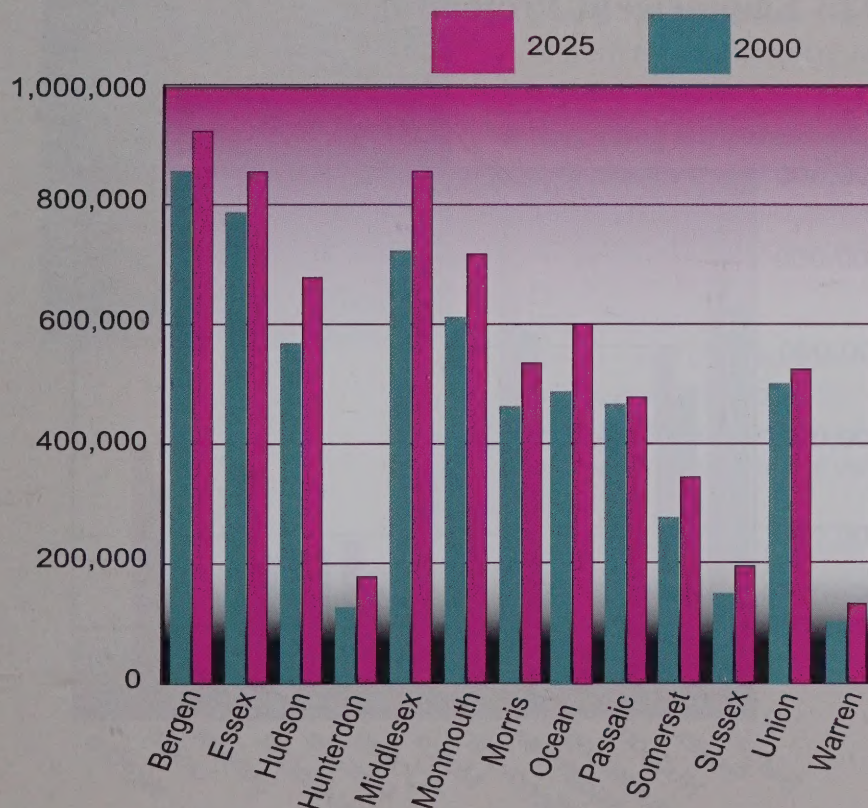
**Aging Population** — The "baby boom" generation is now passing through its prime employment years, ages 37 through 55, when driving rates increase. Nearly 14 percent of all regional residents are over 65, and the average age in the state rose to 37 from 34.3 during the 1990s. Areas with growing numbers of elderly residents must invest in shuttle buses and other alternatives to driving.

**Household composition** — Households in the region have undergone profound changes. Household size has been shrinking, with a statewide average of 2.7 people in 1998, (down from 3.5 a half century ago). This largely reflects an increase in single-person households, deferred marriages, and declining birth rates. Smaller, more numerous households generate more trips.

**Immigration** — Fully 20 percent of foreigners coming to the United States settle in the greater New York-New Jersey-Connecticut metropolitan area. Immigration was the dominant force underlying the region's population growth in the 1990s. It has increased the population of low-income residents dependent on mass transit.

**Travel Limitations** — About 8 percent of the region's population — nearly half a million people — are classified as "mobility impaired" due to physical disability. In addition, 14 percent of households do not own cars. Transit, paratransit and walking are important for these residents.

## 2025 Population Projections





# ECONOMIC GROWTH

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**N**orthern New Jersey has enjoyed the fruits of an unprecedented national economic expansion. Even allowing for short term reversals, the region's mature economy is expected to continue growing over the next two decades, although at a slower pace than U.S. growth overall. Services, and to a lesser extent finance, have become the region's economic workhorses, while manufacturing continues to decline. In addition, high-tech firms employ roughly a tenth of the state's private sector work force.

Regional growth trends of the late 20th century are anticipated to continue, particularly in terms of expansion in the western and shore areas. However, growth in the old industrial centers, such as Newark and Jersey City, also is expected, facilitating an urban renaissance in the region.

The booming economy has had important benefits. New Jersey is second only to Connecticut in income per capita. Northern New Jersey is the center of much of that wealth: residents of the region have personal incomes that are 4.4 percent higher than the statewide average.

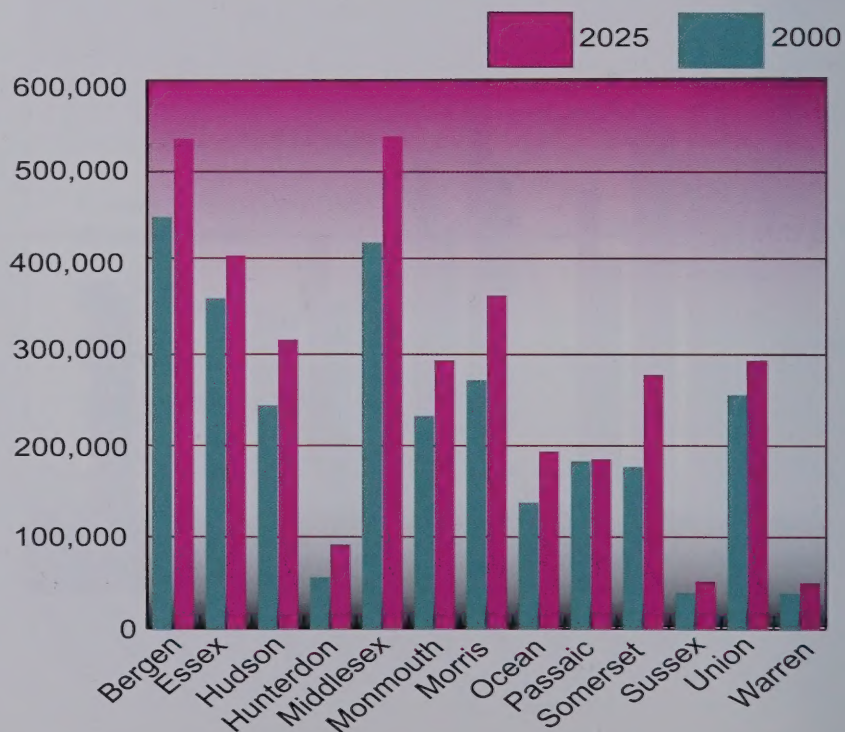
However, these benefits have not been equally distributed: poverty persists, especially in the region's more urban counties. In the NJTPA region, 510,700 people — 8.5 percent of the population — live below the poverty

line. More than a third are children. Addressing the transportation needs of this population will require special efforts by the NJTPA, including improving reverse commute options and promoting environmental justice.

The overall growth in income and employment signals an improved quality of life in the region. However, combined with demographic and economic factors cited previously, it adds to the volume of trips on the transportation network. Those in households with incomes over \$75,000 average 3.6 trips per weekday, compared with 2.6 for those with household incomes under \$25,000.

The domination of the service sector and the ongoing shift of jobs to suburban locations pose serious challenges for the region's traditional public transit. Most job growth has taken place in areas not easily accessible from existing rail lines. The low density of much wholesale/retail trade and office development makes it difficult to provide traditional bus service. The advent of big-box retail centers — together with the development of warehousing and office parks in outlying suburban and rural areas — has given rise to increased truck traffic and has created more complex consumer travel patterns.

## 2025 Employment Projections





# TRAVEL PATTERNS

## PURPOSES OF TRIPS

### Work 29.7%

Between home & work 18.1%

Work-related trips 2.0%

Between work & non-work related destinations 0.0%

### Other trips to or from home 52.6%

Social/recreational destinations 14.1%

School 10.0%

Personal business 9.3%

Shopping 9.2%

Serving passengers 8.2%

Other destinations 1.8%

### Other non-home/non-work 17.5%

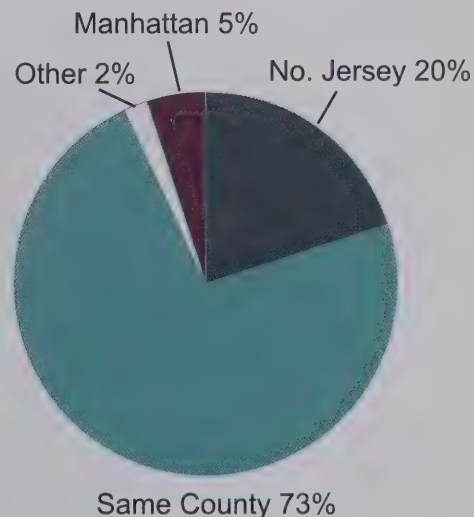
Among the key features of travel in the region are the following:

- On average, residents make 3.4 trips totaling 33 miles a day.
- Most travel is local – more than 75 percent of all trips do not cross county borders. These include shopping, recreation and work trips.
- Fifty-six percent of residents work in the same counties in which they live, and another 23 percent work in an adjacent county.
- Work trips represent 30 percent of travel. Work trips have a disproportionate impact on travel because they are concentrated during a few hours each weekday morning and evening. They place heavy demands on nearly every component of the transportation system.
- Women living in households with children make the most trips of all, regardless of their employment status. In fact, women working part-time with two or more children at home make more trips – over five per day – than any other demographic group. To attend to the needs of a family, these travelers must juggle destinations and travel modes.
- Residents make over 80 percent of their trips by car. The rate ranges from 52 percent in Hudson County

to almost 89 percent in Somerset County. Nine percent of our trips are made on foot or by bicycle.

- Lower income residents are more likely to take buses and nearly three times as likely to walk as wealthier residents.

## Weekday Destinations of NJTPA Residents



Source: Regional Travel — Household Interview Survey



# ACCESS, MOBILITY AND CONGESTION

**U**nderstanding how well the transportation system works involves three related concepts: Access, Mobility and Congestion. Transportation provides access to places. Mobility, the ability to move around, is in effect the ability to take advantage of this access in an effective and efficient way. Congestion, due to traffic or

other factors, leads to a lack of mobility, which in turn can hinder access.

The NJTPA examines measures of access and mobility around the region to identify where transportation is working best and where needs exist. Traffic congestion that hampers access and mobility pervades northern New Jersey. Congestion is a cause

of frustration and cost to travelers but it also is a sign of economic activity. When congestion exceeds the transportation system's capacity, quality of life suffers and economic growth is hindered. This breaking point varies from place to place in the myriad landscapes of northern New Jersey.

Overall, about a quarter of lane-miles operate at congested "levels of service" during weekday peak periods — the morning and evening rush hours. Increasingly, congestion also occurs on busy weekend afternoons in many areas.

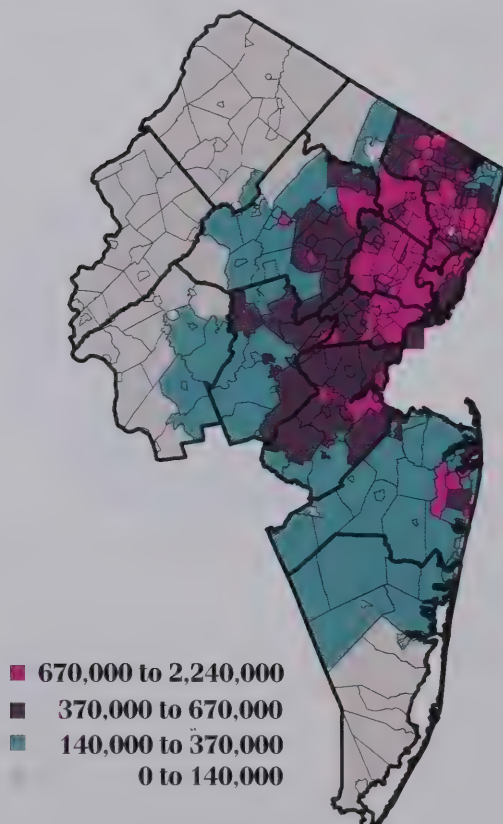
As of 1998, vehicles traveled a total of 64.6 billion miles on New Jersey roads, with an estimated 50 billion in northern New Jersey. The increase in vehicle-miles traveled (VMTs) is slowing but the NJTPA forecasts an additional 10 billion annual VMT by the year 2025 — a 20 percent increase.

Northern New Jersey is among the most congested regions in the nation, but it is not the worst. The region is substantially less congested than the Chicago area but comparable to the Houston area.

This plan seeks to address functional flaws in our transportation system that can worsen congestion, including:

- missing links and connections on the road and rail networks;
- missing links between modes;
- gaps in pedestrian or bicycle facilities;
- abrupt decreases in the number of roadway lanes;
- overburdened interchanges; and
- structurally deficient or functionally obsolete bridges.

**Jobs Within 30 Minutes Per Worker**





# STRATEGIES

**T**he NJTPA Congestion Management System (CMS) analyzes and monitors measures of congestion and seeks to identify strategies for improving access and mobility. Such strategies must be tailored to conditions in each locale but in general they involve changes in one or more of three factors: land use, transportation system supply or traveler behavior. Among the strategies examined are:

**Land Use** — Addressing land use issues, as guided by the New Jersey State Development and Redevelopment Plan (SDRP), will help move the region toward a sustainable future. This includes encouraging mixed-use development that puts jobs, housing, shopping and other destinations in closer proximity. The NJTPA plan helps to fulfill the goals of the SDRP through scoring systems that give extra points to projects and initiatives that are located in urban areas or growth centers designated by the SDRP; that facilitate alternatives to driving, including walking, biking and transit; and that maintain and improve existing roadway networks rather than expanding roadway capacity.

**Market Forces** — Market forces, such as varying tolls by time of day (congestion pricing) and cashing out employer parking benefits can be used to affect travel demand.

**New Technology** — Technologies such as electronic “EZ-Pass” toll collection have made variable pricing strategies possible. Other so-called Intelligent Transportation System (ITS) technologies are designed to improve travel safety, warn drivers of trouble spots and provide quicker response to accidents and breakdowns.

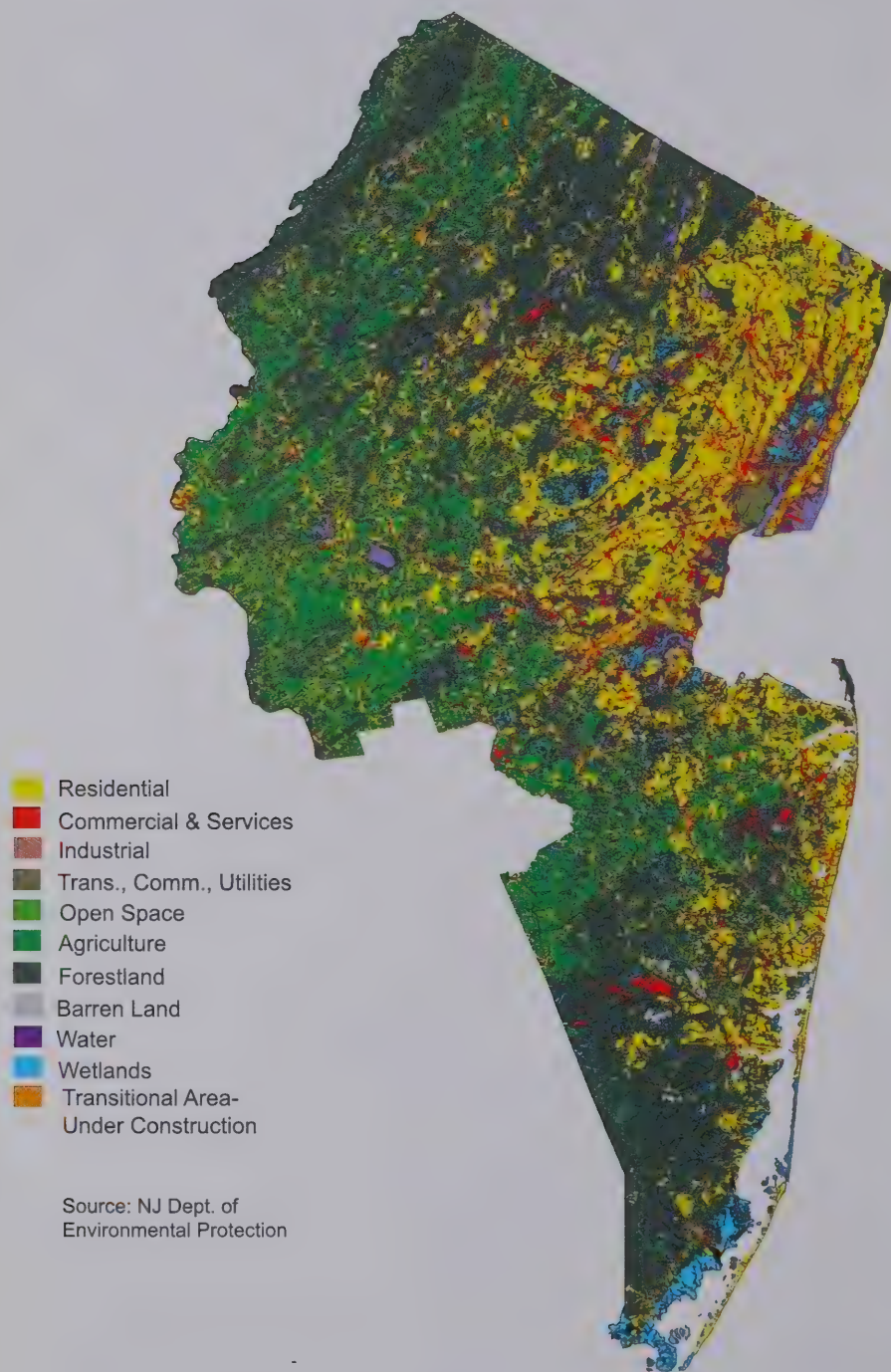
**Transit Services** — While not suitable to all areas, mass transit can effi-



Mark Glass / NJ Transit



## Regional Land Use Patterns



ciently serve a broad range of travelers. Commuter rail, light rail, buses, jitneys and paratransit integrate well into the region's denser parts. Ferry services are effective for trips to and from Manhattan.

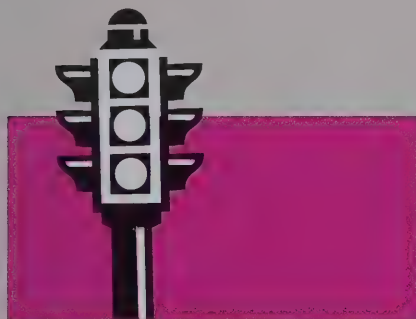
**Walking and Biking** — These modes provide options for the shortest trips. Creating continuous sidewalks encourages walking and biking, as do bike lanes, bike storage areas at transit stations, reconfigured street grids, and attractive, safe walking environments. Related traffic calming strategies can slow vehicular traffic to facilitate walking and biking.

**Ridesharing** — These strategies, which try to make more efficient use of our roads by putting more people in each vehicle, have met with mixed success in New Jersey. Some HOV lanes continue to be modestly effective. Transportation Management Associations (TMAs) in the region help form car or van pools, work with employers to establish bus or van shuttle services, and promote flexible work hour policies to reduce peak period congestion.





**Road Improvements** — Physical improvements in road engineering can make traffic flow more smoothly and provide better access to some destinations. Changes in intersection configurations and signals, truck restrictions, ramp metering and controlling access to driveways can help.



**Telecommuting** — Advances in telecommunications may significantly increase the number of people who "telecommute" from their homes, helping reduce work commutes. However, such home-based work may increase other types of travel, such as deliveries of supplies and travel to meetings.

**Incident Management** — Centers such as the NJDOT Operation Center and the TRANSCOM incident advisory network help speed response and clearance times when accidents, breakdowns, or other traffic incidents occur.

**Road Capacity** — This strategy is a last resort. Building new roads or expanding roadway capacity is expensive and often faces strong local opposition. In addition, adding capacity may not provide permanent congestion relief, since it can encourage sprawl development that adds more cars to the road. In any case, the Clean Air Act Amendments strictly limit highway capacity increases in air quality non-attainment areas such as northern New Jersey. We can only pursue such expansions when other solutions are not feasible.





# REPAIR AND MAINTENANCE

**N**orthern New Jersey is burdened with greater repair and maintenance needs than many other regions. Much of the region's highway and transit infrastructure was built decades ago and now needs repair and replacement. Other facilities are antiquated in design and must be modernized. Severe weather conditions and the intensive use of this infrastructure accelerate wear and deterioration, creating critical safety issues.

The NJTPA has responded to this challenge by making maintenance, repair and improvement of existing elements of the transportation network its top priority in allocating federal transportation funding. Seventy-five percent of highway and bridge funding in the first year of the NJTPA Transportation Improvement Program

(TIP) for FY 2001-2003 is programmed for these "fix it first" purposes. Only six percent of this funding goes to new road capacity.



Bridge needs are of particular concern in the region. The New Jersey Association of Counties estimates that 40 percent of the state's major local bridges are structurally deficient or functionally obsolete. The NJTPA is taking special efforts to assist in meeting the backlog through its Local Scoping and Local Lead programs. These efforts allow the NJTPA subregions to apply for federal funds to prepare and implement their own priority projects. Based on current funding levels, the NJTPA will make available \$50 million in the Local Scoping Program and \$500 million in the Local Lead Program over the next 25 years.



# MASS TRANSIT

**B**y providing a viable alternative to driving, mass transit eases the crush of traffic on roads, reduces pollution and supports economic activity. Because of transit's many benefits, the NJTPA has invested about 40 per cent of the federal funding under its jurisdiction in mass transit over the last several years.

Projects undertaken in the past few years – including new rail stations and connections, a new light rail system and upgrading of bus and rail vehicle fleets – have allowed transit to reach new destinations and provide better service. Additional major projects that will be completed over the next few years include:

- the Secaucus Transfer station, providing new options for reaching mid-town Manhattan and New Jersey destinations;
- the second phase of the Hudson Bergen Light Rail Transit system, extending the line into Bergen County;
- the Montclair Connection, providing expanded direct access to mid-town Manhattan;
- a new rail station linking the Northeast Corridor line to Newark Airport;
- the first phase of the Newark Elizabeth Rail Link, connecting Broad and Penn Stations in Newark; and
- a new Bay Shore ferry to Manhattan.

Michael Rosenthal / NJ Transit



*Virginia McPhearson, Engineer,  
Raritan Valley Line*



Maintaining high quality service for a rapidly growing ridership requires ongoing investment to keep the existing transit system in good repair. In coming years, NJ Transit will have to expand such investments, including much-needed projects to improve rail station parking and access. One potentially promising approach involves shuttles or jitney services. Other challenges include the need for expanded bus park-and-rides, limited capacity at

*Hudson-Bergen Light Rail Line*

Michael Rosenthal / NJ Transit



# Regional Rail Transit Index

The Index consists of 4 categories scored from 1 to 5 by quintile interval at the census block group level. The 4 categories based on density are: population, population with a mobility impairment, households with no vehicle available, and employment.

## Transit Need / Potential

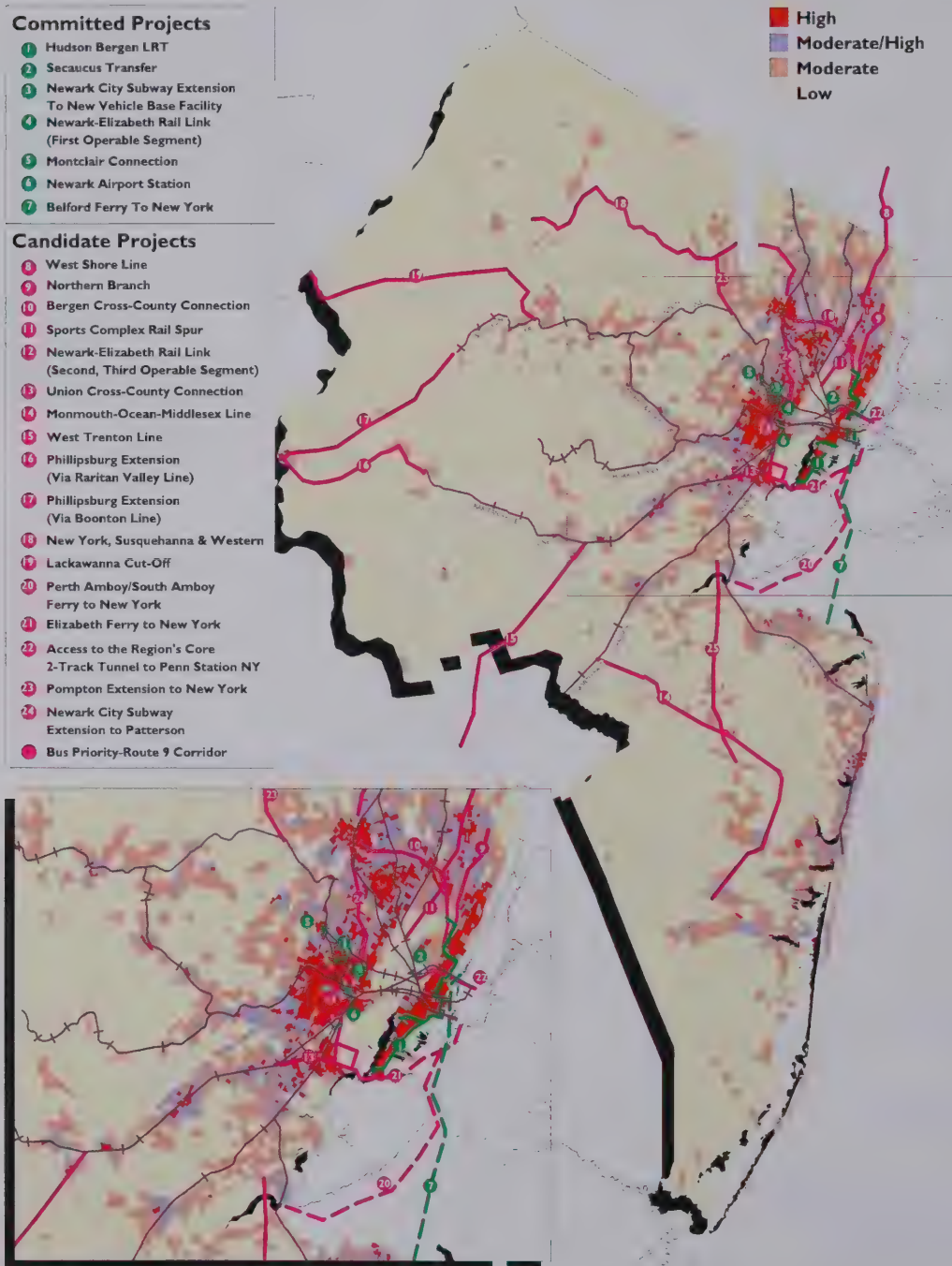
- High
- Moderate/High
- Moderate
- Low

### Committed Projects

- 1 Hudson Bergen LRT
- 2 Secaucus Transfer
- 3 Newark City Subway Extension To New Vehicle Base Facility
- 4 Newark-Elizabeth Rail Link (First Operable Segment)
- 5 Montclair Connection
- 6 Newark Airport Station
- 7 Belford Ferry To New York

### Candidate Projects

- 8 West Shore Line
- 9 Northern Branch
- 10 Bergen Cross-County Connection
- 11 Sports Complex Rail Spur
- 12 Newark-Elizabeth Rail Link (Second, Third Operable Segment)
- 13 Union Cross-County Connection
- 14 Monmouth-Ocean-Middlesex Line
- 15 West Trenton Line
- 16 Phillipsburg Extension (Via Raritan Valley Line)
- 17 Phillipsburg Extension (Via Boonton Line)
- 18 New York, Susquehanna & Western
- 19 Lackawanna Cut-Off
- 20 Perth Amboy/South Amboy Ferry to New York
- 21 Elizabeth Ferry to New York
- 22 Access to the Region's Core 2-Track Tunnel to Penn Station NY
- 23 Pompton Extension to New York
- 24 Newark City Subway Extension to Patterson
- 25 Bus Priority-Route 9 Corridor







Michael Rosenthal / NJ Transit

### Red Bank Station

New York Penn Station and the lack of electrification on the Raritan Valley Line and part of the North Jersey Coast Line.

Increasing maintenance investments will consume a growing share of NJ Transit's available capital resources. For this reason, NJTPA and NJ Transit must be judicious in making commitments to

expensive proposals for new or restored rail lines. Several such proposals, covering virtually all the counties in the NJTPA region, are at various stages of planning and development. In addition, a new multi-billion dollar rail tunnel under the Hudson River has been proposed.

These proposals will require careful study and planning to ensure they will attract substantial ridership, address community concerns and, where necessary, successfully integrate with existing freight rail operations.

These many hurdles mean that over the next two decades the NJTPA will use a measured approach that provides support for the continued development of all proposed rail projects and focuses on advancing the most promising towards full funding and implementation. Over the long term, additional funding from state and federal sources – and possibly from increased fares – will be necessary. Private funding, innovative financing techniques and public-private partnerships must also be explored.

Other priorities for the mass transit system include:

- better integrating transit stations and facilities into communities, through “transit-friendly design”;
- implementing new technologies, such as systems to give riders real-time information about system operations; and
- establishing a joint ticketing system for New Jersey and New York transit systems over the long term.



Mark Glass / NJ Transit



Michael Rosenthal / NJ Transit

### Newark Airport Station



**N**orthern New Jersey is home to some of the nation's major goods movement facilities. These include:

- the largest marine port on the North American Atlantic seaboard, which serves 34 percent of the continent's population;
- an extensive rail freight network that is being upgraded and expanded as a result of the acquisition of Conrail by Norfolk-Southern and CSX railroads;
- Newark International Airport, one of the fastest growing air cargo hubs in North America; and
- a roadway network that carries truck movements to the

NY/NJ/PA/CT metro market and the surrounding mid-Atlantic and New England areas.

This freight network, which supports nearly every aspect of regional commerce, must operate efficiently and cost-effectively, especially given increasing demands by businesses for "just-in-time" deliveries. But, because of congestion and other factors, it now costs about twice as much to move an intermodal container within the New York-Northern New Jersey region as it does, on average, elsewhere in the United States. The key objectives of the NJTPA region regarding goods movement are to maximize the efficient and safe distribution of goods to help the economy grow while keeping costs low and to minimize the adverse

## GOODS MOVEMENT

impacts of freight traffic on communities and the environment.

With its concentration of major marine, air and landside freight facilities, northern New Jersey is poised to undergo a dramatic growth in freight business activity. The Port Authority of NY&NJ in 1999 projected that port traffic will double over the current level to five million TEUs (20-foot equivalent container units, the standard ocean cargo shipping unit) by the year 2010. The traffic will triple by 2040.

To handle this huge increase in maritime cargo, the port must use new technologies to maximize efficiency of existing terminals. It must also address dredging issues. The US Army Corps of Engineers calls for eight channels to be dredged to 50 feet. This will allow the region to accommodate deeper draft "megaships" with cargo capacities of over 6,600 TEUs and attract direct shipments from Asia.

However, the region must find cost-effective alternatives to ocean disposal for dredge material. It also must explore creating new "deep water" facilities at sites such as the former Military Ocean Terminal in Bayonne.



Bill Witkop





## Existing Warehouses Within 75 Mile Radius

Radius	Total Warehouse in Sq. Ft.	Percent
10 MI	250 Million	40%
20 MI	465 Million	75%
30 MI	550 Million	90%
40 MI	580 Million	95%
50 MI	600 Million	99%
75 MI	608 Million	100%

### LEGEND (sq. ft. by zip code)

- 18.46M to 30.77M
- 7.69M to 18.46 M
- 1.54M to 7.69M
- 0 to 1.54M

Source: Moffatt & Nichol Engineers

The rising tide of goods movement will add to the volume of truck traffic on the region's already congested road network. The NJTPA, while continuing to promote more efficient truck movement by maintaining and upgrading existing roads and bridges, will seek to limit the growth of truck traffic by encouraging rail alternatives and improved land use. The NJTPA supports implementation of the Portway project, a 17-mile semi-dedicated trucking route that, among other functions, will allow efficient movement of containers from the port to rail terminals. Portway will be part of a larger, multi-county Intermodal Corridor.

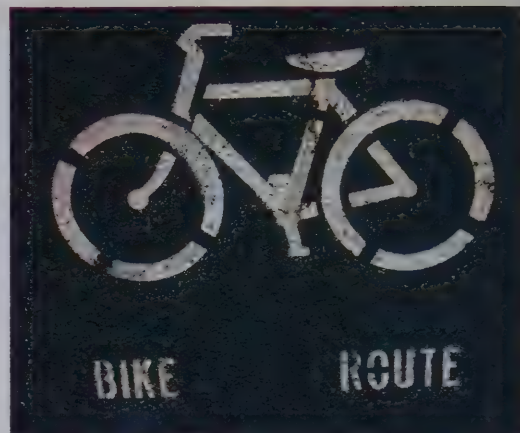
The NJTPA is also working with New York agencies to investigate options for moving rail freight across the Hudson River such as a new rail freight tunnel or expanded barge operations. Another initiative involves encouraging redevelopment of abandoned industrial "brownfield" sites by freight-related businesses which will help reduce trucking to and from warehouses on the fringes of the region.

Achieving greater use of rail freight will depend on efforts by CSX and NS to upgrade the rail freight network.

Challenges they face include improving existing infrastructure to allow for double-stack clearance, addressing community concerns and accommodating joint passenger and freight traffic on key lines and facilities. *Access & Mobility* recommends a substantial increase in the state's rail freight capital fund to assist in addressing these needs as well as for supporting improvements for short line railroads, particularly track and bridge upgrades.

# WALKING & BIKING

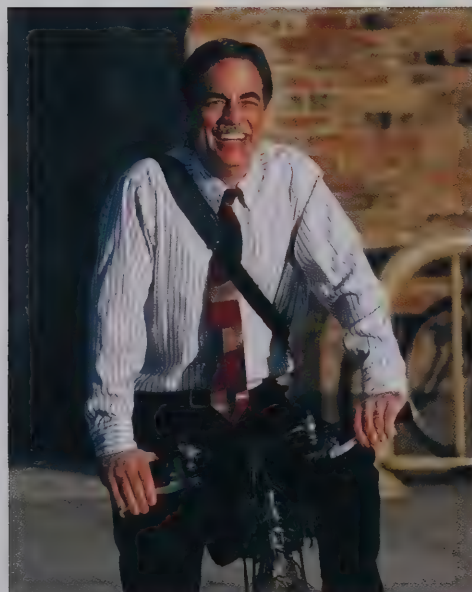
**W**alking and biking present travel alternatives for short trips and for access to transit. However, absence of sidewalks, dangerous traffic conditions, a lack of direct travel routes and other obstacles often hamper walkers and bicyclists. To create a transportation system that is truly "multi-modal," the NJTPA has worked to make the planning and development of bicycle and pedestrian facilities a regional priority.



The NJTPA goal is to create safe, well-connected pedestrian networks throughout our region. However, reaching this goal can be complicated because roads, sidewalks and trails are owned and maintained by various state and local agencies, as well as private entities.

To assist pedestrian planning, the NJTPA has created a new index to identify places with high population density, mixed land use, and road networks that are most likely to be conducive to pedestrian travel. This analysis will be used to direct funding for pedestrian and bicycle projects. The NJTPA also encourages our member agencies to develop bicycle and pedestrian plans and projects as part of their planning efforts.

*Access & Mobility* identifies bicycle and pedestrian needs and projects throughout the region. This includes \$18 million allocated in FY 2000 for bicycle and pedestrian projects and 24 additional initiatives, whose costs have yet to be determined, that are being studied or developed for implementation in the next several years. Among the planned improvements are bicycle trails, pedestrian bridges, sidewalks and crosswalks. In keeping with federal mandates, the NJTPA will work with NJDOT to ensure that, to the greatest extent possible, roadway improvements approved by NJTPA include bike lanes, sidewalks, and other facilities to improve the biking and walking environment.





# SUSTAINABLE GROWTH

**W**hile it is vital to maintain economic growth in the region, that growth must be supported by a transportation system that protects natural resources, environmental quality and the region's communities. The goal must not be growth at any cost but "sustainable growth." Among the issues that must be addressed to achieve sustainable growth are the following:

**Air Quality:** The NJTPA region is an air quality "non-attainment area." That means it fails to meet federal standards for various pollutants. As a result, the NJTPA must demonstrate, through a computer modeling process, that the projected results of the long-range plan and short-term Transportation Improvement Program (TIP) do not exceed emission budgets set by the state. The NJTPA contributes to improved air quality by funding projects that improve transit and by making infrastructure improvements that reduce congestion.

**State Plan:** The State Development and Redevelopment Plan (SDRP) was created to achieve a consensus-based vision of how the state's cities and



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towns can flourish while also achieving improved land use. This includes revitalizing urban centers; conserving natural resources; providing adequate public services at reasonable cost; and preserving open space. The NJTPA actively supports these goals by linking the project prioritization process to SDRP recommendations.

**Environmental Impacts:** The National Environmental Policy Act (NEPA) aims to help public officials understand the environmental consequences of major projects and take actions that protect, restore and enhance the environment. NEPA requires planners to develop an Environmental Impact Statement (EIS) and consider alternatives and mitigation steps for major construction projects. Other federal and state laws require planners to consider energy efficiency and wetlands conservation.

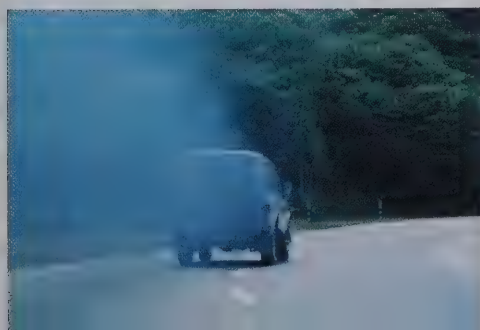
**Environmental Justice:** The benefits and burdens of transportation investments must be shared equitably among all residents of the region. The transportation system has not always served the needs of certain residents, particularly low-income and minority



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*South Orange*

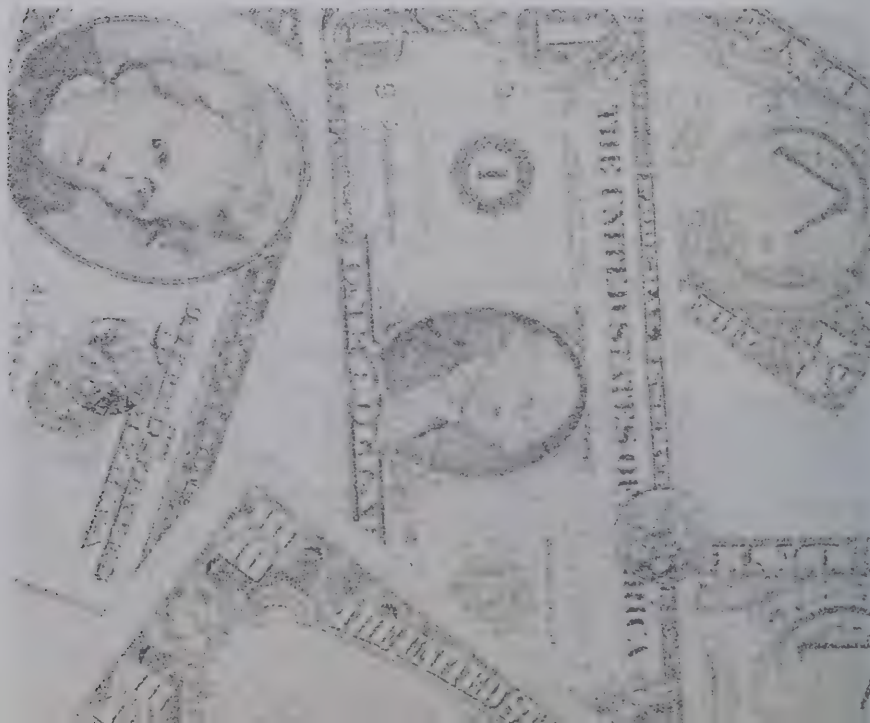
communities. Environmental Justice has become more of a concern throughout the planning process. It is a factor in identifying mobility needs, selecting investments, creating programs to improve access of urban residents to suburban jobs and promoting "context sensitive design" to foster early and continuing community involvement.



# FINANCING

**A**ccess & Mobility demonstrates that the region's proposed transportation investment agenda is consistent with reasonably available sources of revenue. Based on conservative financial assumptions of continued federal and state funding at the current levels, at least \$40 billion will be available for transportation investments over 25 years. This number is based on the continuing reauthorization of federal transportation legislation and a continuing state commitment to the Transportation Trust Fund. This does not include additional investment in transportation that may come from the private sector.

Despite this funding, large unmet needs will continue to exist, especially as the transportation system ages and more development occurs. The NJTPA will continue to focus the bulk of funding on addressing the backlog of maintenance needs and on making existing facilities operate more efficiently. Capacity expansions – including completion of the state-designated “Circle of Mobility” transit projects and selected highway expansions currently under development – will be done very selectively after careful study and planning. In the long term, ways to find additional revenues must be explored, particularly for expanding transit services.





# CORRIDOR PLANNING PROCESS

The way in which the NJTPA makes “planning sense” of its complex region is through a Corridor Planning Process that focuses on 18 Regional Transportation Corridors. The NJTPA identified these corridors based on major travel markets and road and rail transportation infrastructure. Over the past two years, the NJTPA analyzed travel and other data to pinpoint current problem areas, as well as spots where system failures will occur, in each corridor. The staff then brought the findings of this analysis to a series of workshops around the region to build consensus on the goals and needs of the corridors.

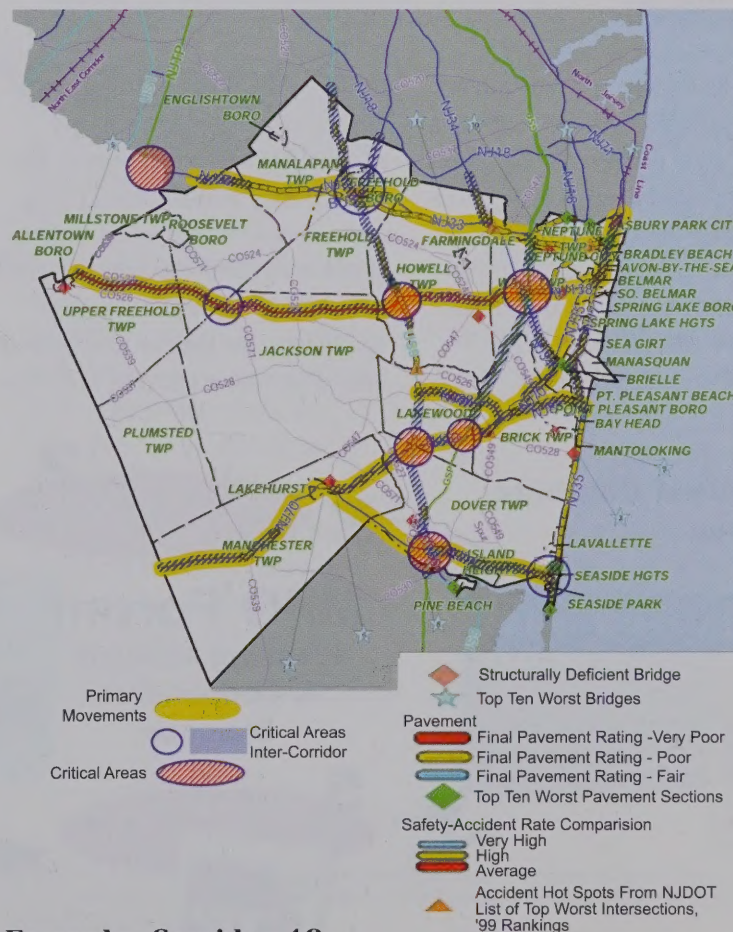
Based on this effort, *Access & Mobility* includes 18 corridor sections that provide detailed analysis of the travel characteristics and needs in each corridor. Many of the short- and mid-term needs in each corridor have already been targeted for funding. The long-term needs – identified in each section as Major Mobility and Accessibility issues – will be considered for further study and development as part of the NJ Transit and NJDOT “project pipelines.” These pipelines transform general problems or initiatives into specific projects that can become candidates for future TIP funding and implementation.

But which problems and initiatives can enter these project pipelines? To answer that question, the plan establishes a scoring process that awards points to issues and initiatives. These points are based on parameters related to the NJTPA's six goals and the Corridor Planning Process. There are four categories of parameters:

1. Mobility and accessibility
2. Primary movements
3. Critical problems areas
4. Sustainability/environmental justice.

Those problems or initiatives that score highly and meet other criteria will be recommended for inclusion in the project pipelines.

The Corridor Planning Process will continue throughout the life of the plan. It will include data analysis to update corridor functions and needs, outreach to stakeholders and citizens in each corridor and annual evaluation and scoring of issues and initiatives.



**Example: Corridor 18**



# TIP PROGRAMMING

**P**rojects that emerge from the pipelines become candidates for funding and implementation through the Transportation Improvement Program (TIP), a three-year agenda of projects for the region.

Projects must be included in the TIP to qualify for federal funding. To select projects for the TIP, each year the NJTPA uses a scoring system similar to that used earlier in the process to rank candidate projects. The system is

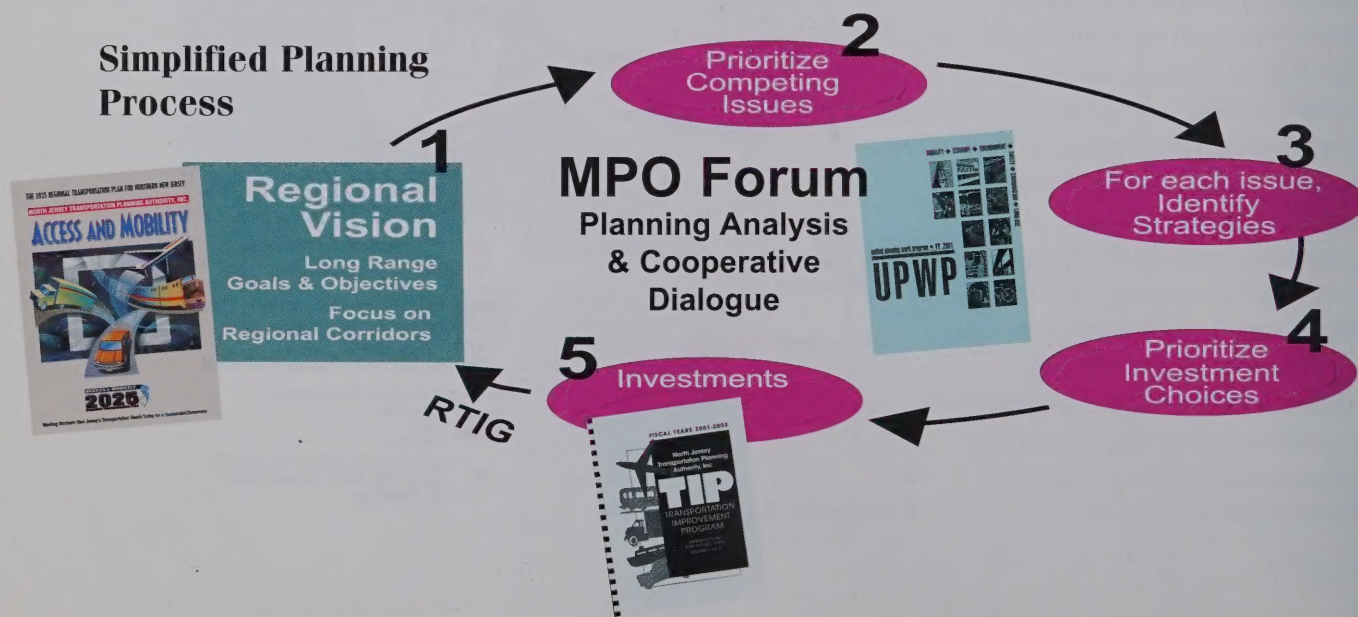
tied to the six NJTPA planning goals. Projects that help address repair and safety needs get additional weight at this stage, as do those addressing environmental sensitivity.

**T**he Regional Transportation Investment Guide (RTIG) is a set of policies, standards and procedures used to guide NJTPA decision-making. Investment policies — such as the emphasis on “fix it first” and the preference for transit strategies where cost-effective — are embodied in *Access & Mobility* and set

by the NJTPA Board of Trustees with input from officials, citizens and stakeholders around the region. The policies are translated into criteria and parameters used in the scoring systems that prioritize projects and issues for further development or investment. The policies also guide the studies and other planning work con-

ducted in the region, as detailed in the NJTPA Unified Planning Work Program. RTIG provides for the periodic review and updating of investment policies, standards and procedures based on an analysis of needs and trends in the region and evaluations of the results achieved from past investments.

## Simplified Planning Process







# A SAMPLING OF LONG TERM ISSUES

27

NJTPA

**A**ccess & Mobility looks at critical issues facing the region – both as a whole and in 18 regional transportation corridors. Below is a sampling of issues that must be explored and addressed over the long-term:

- Improving access to transit through jitney and other feeder services, enhanced parking at several rail stations and increased park-and-ride opportunities for buses.
- Improving access to coastal areas and handling seasonal congestion through upgraded roads and rail services, possible use of reversible lanes in some areas and rehabilitating substandard bridges.
- Establishing new ferry services to Manhattan such as from Elizabeth or Perth Amboy.
- Improving freight movement and reducing its environmental impacts by creating an alternative truck roadway connecting the port, airport and rail terminals; promoting business development of brownfield sites with ready rail access; and exploring options for moving rail cars across the Hudson River.
- Improving pedestrian and bicycle access to major commercial sites and other activity centers, particularly those near to residential areas, by creating continuous sidewalks and bikeways.
- Exploring road and transit options to better serve new office parks and residential developments that currently generate heavy traffic on local roadway networks.
- Addressing roadway bottlenecks, design issues and missing turning movements on key travel routes such as Routes 22, 15, 17 and 18 and at interchanges such as I-78/Garden State Parkway and I-287/I-80.
- Pursuing the Access to the Region's Core study that would build an additional Hudson River rail tunnel, creating needed capacity for expanded commuter rail service.
- Looking at light rail opportunities throughout the region, including in Bergen, Essex, Hudson, Passaic and Union counties.
- Exploring major rail transit initiatives, such as new or restored services on the West Trenton, NYS&W, Lackawanna Cutoff and Middlesex-Ocean-Monmouth lines and extension of the Raritan Valley Line.
- Examining the effect of transportation on land use and development patterns in key areas, including the Hackensack Meadowlands Development District.
- Exploring strategies to address congestion and gridlock in urban areas such as downtown Jersey City.
- Serving an aging population, particularly in Ocean County and other areas with retirement communities, by investing in paratransit services, altering roadway design and increasing the legibility of signs.



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